

JVC

SPECIFICATIONS

Model	AV-32WP2EP	AV-32WZ2EP	AV-28WZ2EP
Item			
TV RF systems	CCIR L, B/G, I		
Colour systems	PAL, SECAM (NTSC 3.58 / 4.43 MHz only in EXT modes)		
Channels and frequencies	F2-F10, F21-F69, E2-E12, E21-E69, S1-S41, X, Y, Z, Z+1, Z+2, A-H, H+1, H+2 * Receives French cable TV channel frequencies 116-172 MHz and 220-469MHz		
Sound-multiplex systems	A2/NICAM (B/G, L) system		
Teletext systems	Fastext (United Kingdom system) / TOP (German system) / WST (standard system)		
Power requirements	AC 220 – 240 V, 50 Hz		
Power consumption	Maximum 266 W, Average 161 W, Standby 0.8 W	Maximum 248 W, Average 151 W, Standby 0.8 W	Maximum 242 W, Average 147 W, Standby 0.8 W
Picture tube size	Visible area 76 cm (measured diagonally)		Visible area 66 cm (measured diagonally)
Audio output	Rated Power output 20 W + 20 W + 5 W	Rated Power output 20 W + 20 W	
Speakers	10 cm round x 2, 3.5 cm round x 2, (10 cm x 3 cm oval) x 1	10 cm round x 2, 3.5 cm round x 2	
External input / output	EXT-1, EXT-2, EXT-3	21-pin Euroconnector (SCART)	
	EXT-4	VIDEO IN (RCA) AUDIO L / R IN (RCA) S-VIDEO IN (Mini Din 4-pin)	
	AUDIO OUT	(Variable out (0-1 Vrms), low impedance) CENTRE output (RCA) FRONT L/R output (RCA) SURROUND REAR L/R output (RCA)	
	Headphone jack (stereo mini jack, dia. 3.5 mm)		
Dimensions (W x H x D)	805 mm x 550 mm x 550 mm		716 mm x 489 mm x 496 mm
Weight	50.3 kg	50.2 kg	36.3 kg
Accessories	Remote control unit RM-C791 x 1 AAA (R03) dry cell battery x 2	Remote control unit RM-C793 x 1 AAA (R03) dry cell battery x 2	

Design and specifications subject to change without notice.

Pictures displayed on the screen using this TV's image-processing functions should not be shown for any commercial or demonstration purpose in public places (tearooms and halls in hotels, etc.) without the consent of the owners of copyright of the original picture sources, as this constitutes an infringement of copyright.

JVC

VICTOR COMPANY OF JAPAN, LIMITED

COLOUR TELEVISION

AV-32WP2EN / EP AV-32WZ2EN / EP AV-28WZ2EN / EP

INSTRUCTIONS

Thank you for purchasing this JVC colour television.
To ensure your complete understanding, please read this manual thoroughly before operation.

WARNING:

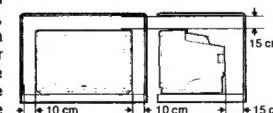
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT
EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

TO ENSURE PERSONAL SAFETY, OBSERVE THE
FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

1. Operate only from the power source specified (AC 220 - 240 V, 50 Hz) on the unit.
2. Avoid damaging the AC plug and power cord.
3. Avoid improper installation and never position the unit where good ventilation is unattainable.

When installing this television, distance recommendations must be maintained between the floor and wall, as well as instalment in a tightly enclosed area or piece of furniture. Adhere to the minimum distance guidelines shown for safe operation.



4. Do not allow objects or liquid into the cabinet openings.
5. In the event of a fault, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.

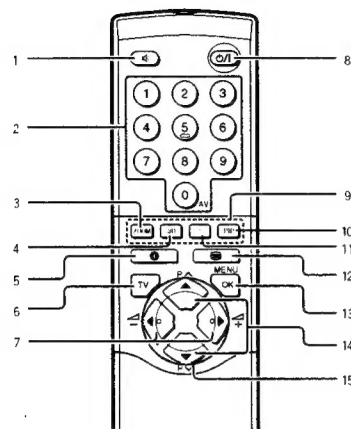
When you don't use this TV set for a long period of time, be sure to disconnect the power plug from the AC outlet.

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Locations of remote control buttons

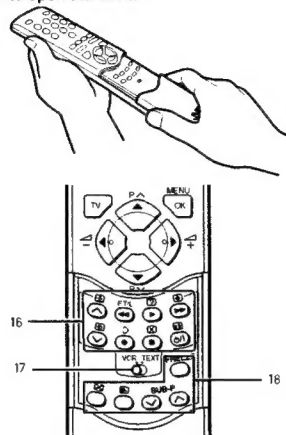
OUTSIDE BUTTONS



① Mute button	p.11
② Number buttons	p.7
③ ZOOM button	p.13
④ 3D button	p.20
⑤ Information button	p.16
⑥ TV button	
⑦ Volume +/- buttons	p.8
⑧ Standby button	p.6, 8
⑨ Colour buttons	
⑩ PIP button (AV-32WP2EN and AV-32WP2EP only.)	p.14
⑪ P. BASS button	p.11
⑫ TV/text button	p.18
⑬ OK button	
⑭ PR channel V/Δ buttons	p.7
⑮ ◀/▶ / ▲/▼ buttons	
⑯ Teletext/VCR control buttons	p.18
⑰ VCR/TEXT selector switch	
<ul style="list-style-type: none"> When switched to the VCR side, the ⑮ buttons function as the JVC VCR control buttons. 	
Notes: <ul style="list-style-type: none"> For details on button functions, see the JVC VCR manual. Depending on your VCR, the remote control may not operate perfectly, and may not even control the VCR at all. When switched to the TEXT side, the ⑮ buttons function as teletext control buttons. 	
⑰ PIP control buttons (AV-32WP2EN and AV-32WP2EP only.)	p.14

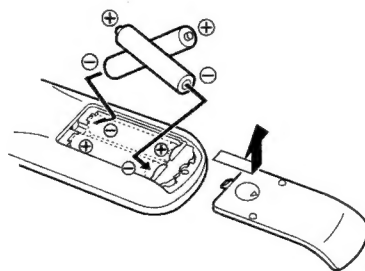
INSIDE BUTTONS

How to open the cover.



Inserting batteries into your remote control

Use two AAA/R03 dry cell batteries. Insert two batteries, observing the + and - polarities, inserting the - end first.



CAUTION:

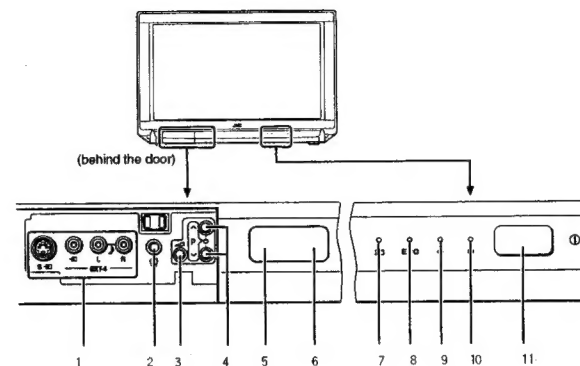
- Follow the cautions printed on the batteries.

Notes:

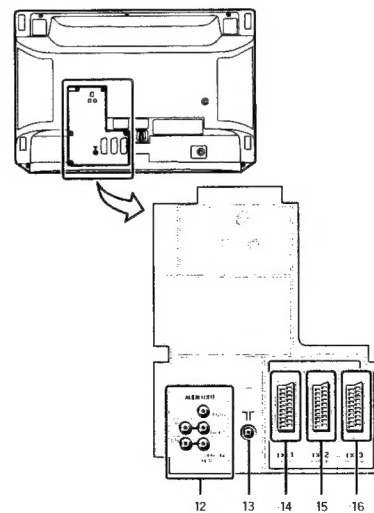
- Battery life is approx. six months to one year, depending on frequency of use.
- If the remote control operates erratically, replace the batteries.
- We recommend that you use the supplied batteries temporarily and replace them as soon as operation becomes erratic. The supplied batteries are for operational testing of the remote control, not for regular use.

Locations of TV buttons and parts

FRONT PANEL



REAR PANEL

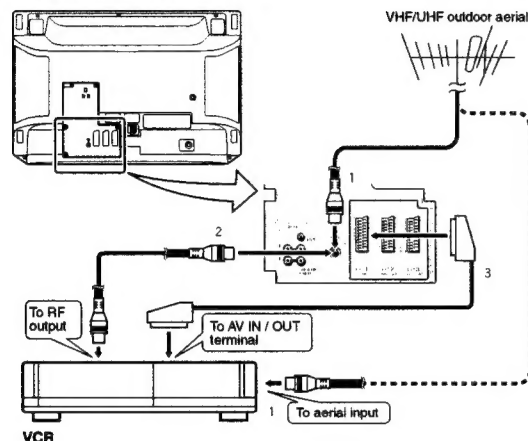


① EXT-4 terminals	p.4, 22
② Headphone jack (mini jack)	p.5
③ Volume button	p.9
④ Up/down buttons	p.9
(You can use this button as the V/Δ buttons of the PR channel. Pressing the ③ Volume button makes this button function as the Volume +/- buttons.)	
⑤ Remote control sensor	
⑥ ECO sensor	
⑦ 3D lamp	p.20
⑧ ECO lamp	p.12
⑨ Sleep timer lamp	p.16
⑩ Power lamp	p.6, 8
⑪ Main power button	p.6, 8
⑫ AUDIO OUT terminals	p.27
⑬ Aerial socket	p.4
⑭ EXT-1 terminal	p.4, 22
⑮ EXT-2 terminal	p.4, 22
⑯ EXT-3 terminal	p.4, 22

PREPARATION AND BASIC OPERATION

1. Connecting the aerial and VCR

If not connecting a VCR, do 1 only.
If connecting a VCR, proceed 1 → 2 → 3.



Notes:

- For further details, refer to manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- You can view video from a VCR without doing 3. For details, refer to the manual provided with your VCR.
- Connect the S-VHS VCR to either the EXT-2 or EXT-3 connector. When the S-VHS VCR is connected to the EXT-1 connector, S-VIDEO input can not be selected.

2. Connecting other external devices

Conditions:

- This TV set has external device connectors, EXT-1 to EXT-4 to which you can connect a VCR. However, there are some differences in functions among them. Consult the following table before making connections.

	EXT-1	EXT-2	EXT-3	EXT-4 (front)
VIDEO IN	✓	✓ *1	✓ *1	✓ *1
VIDEO OUT	✓ *2	✓ *3	—	—
S-VIDEO IN	—	✓ *1	✓ *1	✓ *1
S-VIDEO OUT	—	—	—	—
RGB IN	✓	✓	✓	✓
AUDIO-L IN	✓	✓	✓	✓
AUDIO-R IN	✓	✓	✓	✓
AUDIO-L OUT	✓ *2	✓ *3	—	—
AUDIO-R OUT	✓ *2	✓ *3	—	—
Others	<ul style="list-style-type: none"> Automatic detection and switching of input mode. Automatic detection and switching of ZOOM mode. 			

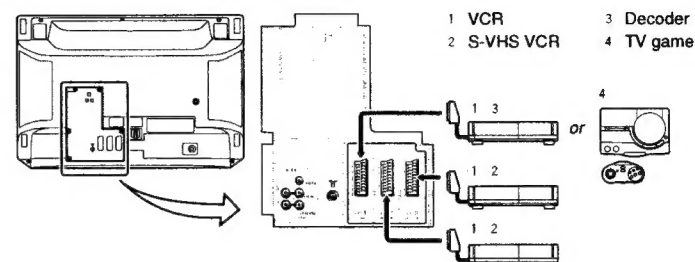
*1 Select VIDEO or S-VIDEO mode from the EXT SETTING menu. For details, see page 22 "EXT SETTING".

*2 Only the TV broadcast is output. Even when a SUB picture is displayed, the output TV broadcast PR channel does not change. However, when another PR channel is being watched in the SUB picture, if the SWAP function is used the output TV broadcast PR channel is switched.

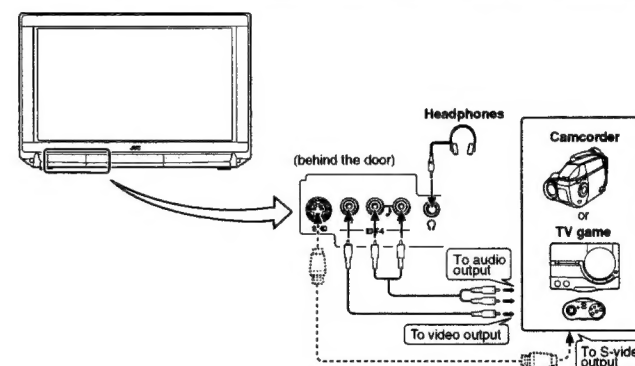
*3 TV broadcasts or inputs from EXT-1, 3 or 4 can be output. For details, see page 22 "DUBBING".

- Use headphones with a stereo mini jack (dia. 3.5 mm). When using headphones, refer to "To listen to the sound using headphones" on page 8.
- For further details, refer to manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- For details on how to connect the AUDIO OUT terminals on your TV and external devices such as the audio amplifiers or speakers, see page 27.

Devices which can be connected to the terminals on the rear panel

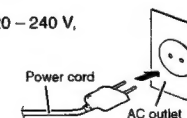


Devices which can be connected to the terminals on the front panel



3. Connecting the power cord

Insert the power plug into an AC outlet (AC 220 – 240 V, 50 Hz).



PREPARATION AND BASIC OPERATION

4. Turning the power and TV on

1. Press the Main power button on the TV to turn the power on.

 The Power lamp lights red (power on), then green (TV on).

If the power lamp stays red and does not change to green:
Your TV is in the standby mode. Press the Standby button on the remote control to turn your TV on.

Note:

- You can also press the PR channel V/Δ button, a number button or the up/down button on the front panel to turn the TV on.

5. Initial Settings

- When the TV is first turned ON, it enters into the initial setting mode, and the JVC logo is displayed.

Note:

- The TV enters into the initial setting mode only once when the TV is first turned ON. If you turn the TV off or exit from the setting menu while performing the initial settings by mistake, you must redo the initial settings, "LANGUAGE" and "AUTO PROGRAM", following the procedures described in page 23.

1. Press any button on the remote control.

Language menu appears.

Selecting the on-screen language

You can select your language from ten languages listed on the LANGUAGE menu. The displayed menus on the screen are described in the selected language.

2. Press ▼/▲ button to select ENGLISH.



3. Press OK button.

English is set for the on-screen display description, and the COUNTRY menu appears.

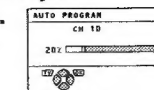


Automatically allocating stations to PR channels

To view a TV programme, you must first allocate broadcast stations to PR channels. You can automatically allocate up to 99 stations to PR channels PR1 to PR 99 on this TV. Broadcast stations that can be received are automatically determined and set to PR channels.

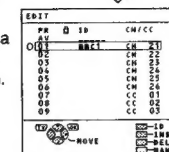
4. Press ▼/▲ and ◀/▶ button to select your country, then press blue button.

Broadcast stations are automatically allocated to the PR channels.



The EDIT menu is displayed after completed the allocation.

- If you want to edit PR channels or allocate a station to PR0 (AV) channel, see page 24 "EDIT/MANUAL" for procedural description.



- The procedure is complete. Press the TV button to exit the menu.

6. Viewing a television programme

1. Select a PR channel.

Selection



- Press the PR channel V/Δ button.

Direct channel selection

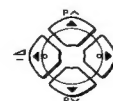
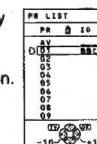


- Press the corresponding number buttons.
Example: To select channel 6, press "6".
To select channel 12, press "1" and "2".

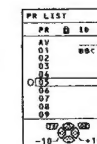
To use the PR LIST to select a PR channel



1. Press Information button repeatedly to select PR LIST.
The PR LIST appears.
- To exit the PR LIST, press TV button.



2. Press ▼/▲ button to select a PR channel.
- Press ▶ button to view the next page of the PR LIST.
- Press ◀ button to view the previous page of the PR LIST.



3. Press OK button.

Note:

- If you want to quit automatic allocation in the middle, press the TV button.

Notes:

- If the picture is not clear or no colour appears, change the colour system manually (see page 11 for details).
- Enter "0" when selecting an AV channel (PR 0 channel).
- If your TV is AV-32WP2EN or AV-32WP2EP, the MULTI-PICTURE function can be used to select a PR channel. For details, refer to "MULTI-PICTURE" on page 15.

Note:

- The B mark will appear on the PR channel when the CHILD LOCK setting is on (see page 17).

PREPARATION AND BASIC OPERATION

2. Press the Volume ∇/Δ button.



The Volume level indicator appears and the volume changes as you press the Volume ∇/Δ buttons.



Turning the TV and power off

1. Press the Standby button to turn the TV off.



The Power lamp changes from green to red.
The TV enters standby mode.

2. Press the Main power button on the TV to turn the main power off.



The Power lamp goes off.

Note:

- To save energy, we recommend that you turn the main power off if you do not plan to use your TV for a long time.

To listen to the sound using headphones

Condition:

Connect headphones to the TV.

1. Press OK button.

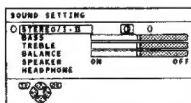
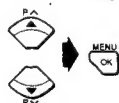


The MENU appears.



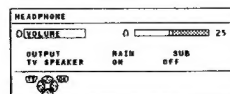
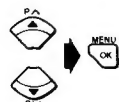
2. Press ∇/Δ button to select SOUND SETTING, then press OK button.

The SOUND SETTING menu appears.

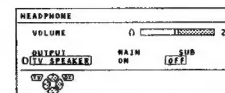
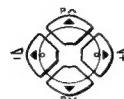


3. Press ∇/Δ button to select HEADPHONE, then press OK button.

The HEADPHONE menu appears.



4. Press ∇/Δ button to select TV SPEAKER, then press ∇/Δ button to select ON or OFF.



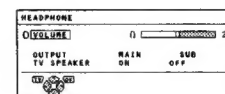
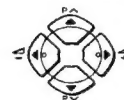
ON: The sound from the TV speakers is not turned off even when the headphones are connected.

OFF: The sound from the TV speakers is turned off when the headphones are connected.

Note:

- The sound output from the AUDIO OUT terminals can not be turned off.

5. Press ∇/Δ button to select VOLUME, then press ∇/Δ button to adjust the volume of the headphones.



6. Press OK button.

This completes the setting.

To select a channel without using the remote control

You can also use the buttons on the front panel of the TV.

1. Press the Up/down button to turn your TV on.



The Power lamp changes from red to green.

Note:

- If your TV does not turn on, press the Main power button, and then press the Up/down button again.

2. Press the Up/down button to select the PR channel.

3. Adjust the volume.



1. Press the Volume button.

The volume level indicator appears.

2. Press the Up/down button while the volume level indicator is displayed.

To turn off your TV, press the Main power button.



The Power lamp goes off.


Note:

- PR channel selection is not available while the volume level indicator is displayed.

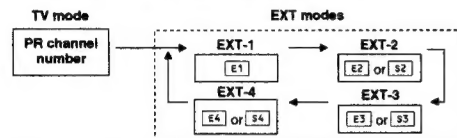
PREPARATION AND BASIC OPERATION

Viewing images from external devices

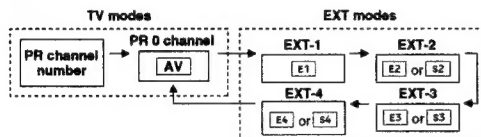
1. Repeatedly press the 0 button to select the EXT terminal.

 The current selection appears, and disappears after several seconds.

When a station is not registered to the PR 0 (AV) channel, pressing the 0 button changes the selection as follows:



When a station is registered to the PR 0 (AV) channel, pressing the 0 button changes the selection as follows:



TV mode:

Shows images input from an external device (such as a VCR) or TV aerial connected to the aerial socket of your TV.

EXT modes:

Shows images input from an external device (such as a VCR) connected to the selected EXT terminal.

- To use S-Video mode to view input from an S-VHS VCR, see "To select S-VIDEO input for a terminal" on page 22. When selecting EXT-2, EXT-3 or EXT-4 input terminals as S-VIDEO input, E2, E3 or E4 changes to S2, S3 or S4 in the display.

Notes:

- If the picture is not clear or no colour appears, change the colour system manually (see page 11).
- When selecting an EXT terminal with no input signal, the EXT number and ID become fixed on screen.

SOUND AND PICTURE

MUTE

You can mute the volume to 0 instantly. This is convenient when answering the phone or when receiving visitors.

1. Press (Mute).

The sound is muted.



To restore the sound:
Press the Mute button again.

POWER BASS

You can enjoy richness and fullness of the bass sound.

1. Press P. BASS.

The POWER BASS turns on.

P. BASS

POWER BASS ON

To cancel the function:
Press the P. BASS button again.

POWER BASS OFF

MULTI SOUND

You can select the multi sound mode for stereo broadcast programmes and bilingual programmes.

Note:

- The MULTI SOUND function has no effect on programmes other than A2 or NICAM broadcast programmes.

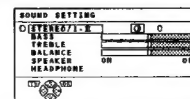
1. Press OK.

The MENU appears.



2. Press to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.



3. Press to select STEREO / I • II.

Notes:

- The multi sound mode display is different from the broadcast programme.
- The multi sound function does not work in EXT modes.
- The STEREO / I • II does not appear in SOUND SETTING menu.

4. Press to select a multi sound mode.

- I : Stereo sound
- II : Bilingual I (Sub I)
- III : Bilingual II (Sub II)
- 0 : Normal sound

5. Press OK.

This completes the setting.

Note:

- When you display the current PR channel number, the current multi sound mode appears for approximately 3 seconds.

TINT

You can choose from among three TINT modes.

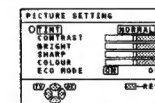
1. Press OK.

The MENU appears.

2. Press to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.

3. Press to select TINT.



4. Press to select a tint mode.

COOL:

A cool white colour base with a boost in the colour and contrast levels. Creating a more vivid picture.

WARM:

Use this mode when viewing film programmes.

NORMAL:

A normal white colour base with no boost in the colour or contrast levels.

5. Press OK.

This completes the setting.

COLOUR SYSTEM

The colour system is automatically selected, but if the picture is not clear or no colour appears, select the colour system manually.

1. Press OK.

The MENU appears.

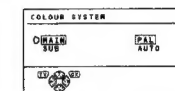
2. Press to select PICTURE FEATURES, then press OK.

The PICTURE FEATURES menu appears.



3. Press button to select COLOUR SYSTEM, then press OK.

The COLOUR SYSTEM menu appears.



4. Press button to select MAIN or SUB.

- If your TV is not AV-32WP2EN or AV-32WP2EP, the SUB will not appear. So you can skip this operation.

MAIN:

You can select the colour system of MAIN picture.

SUB:

You can select the colour system of SUB picture.

5. Press to select the appropriate colour system.

PAL:

PAL system.

SECAM:

SECAM system.

NTSC3.58:

NTSC 3.58 MHz system.

NTSC4.43:

NTSC 4.43 MHz system.

AUTO:

Automatic colour system selection.

SOUND AND PICTURE

Notes:

- Auto may not function properly depending on signal quality. If the picture is abnormal in AUTO mode, select another colour system manually.
- When in TV mode (PR 1 to PR 99), you cannot select AUTO, NTSC 3.58 or NTSC 4.43.
- When in TV mode (PR 0), you cannot select NTSC 3.58 or NTSC 4.43.

6. Press OK.

This completes the setting.

PICTURE/SOUND ADJUSTMENT

You can adjust the picture and sound as you like.

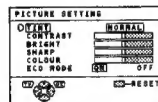
To adjust the picture

1. Press OK.

The MENU appears.

2. Press ∇/Δ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.



3. Press ∇/Δ to select an item, and press \leftarrow/\rightarrow to adjust it.

- To return to the default settings, press blue button.

\leftarrow	Item	\rightarrow
Lower	CONT. (picture contrast)	Higher
Darker	BRIGHT (picture brightness)	Brighter
Softer	SHARP (picture sharpness)	Sharper
Lighter	COLOUR (picture colour)	Deeper
Reddish	HUE (picture hue)	Greenish

Notes:

- You can adjust the HUE (picture hue) only when the colour system is NTSC 3.58 or NTSC 4.43.

4. Press OK.

This completes the setting.

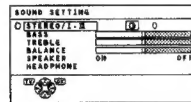
To adjust the sound

1. Press OK.

The MENU appears.

2. Press ∇/Δ to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.



Notes:

- When DOLBY® PRO LOGIC or PRO LOGIC 3D-PHONIC is selected in DIGITAL SURROUND menu, BALANCE and SPEAKER do not appear.

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3. Press ∇/Δ to select an item, and press \leftarrow/\rightarrow to adjust it.

\leftarrow	Item	\rightarrow
Weaker	BASS (low frequency sound)	Stronger
Weaker	TREBLE (high frequency sound)	Stronger
Left	BALANCE (audio balance)	Right

SPEAKER ON/OFF:

Use this function if you connect an audio amplifier and front speakers to your TV. If you set this function to OFF, sound is no longer output from the TV's speakers. For details, see "To use 2 external speakers" on page 27.

4. Press OK.

This completes the setting.

ECO MODE

When you set ECO mode to ON, the screen contrast is automatically adjusted to a setting suitable for the brightness of your room. This reduces eye strain and the power consumption of the TV.

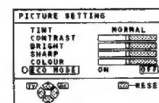
1. Press OK.

The MENU appears.

2. Press ∇/Δ to select PICTURE SETTING, then press OK.

The PICTURE SETTING menu appears.

3. Press ∇/Δ to select ECO.



4. Press \leftarrow/\rightarrow to select ON, OFF.

5. Press OK.

This completes the setting.

- If you turned on ECO mode, the ECO lamp lights.

NATURAL SCAN

When you set NATURAL SCAN to ON, you can remove the horizontal line vibration on the screen so improving picture stability further.

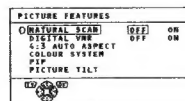
1. Press OK.

The MENU appears.

2. Press ∇/Δ to select PICTURE FEATURES, then press OK.

The PICTURE FEATURES menu appears.

3. Press ∇/Δ to select NATURAL SCAN.



4. Press \leftarrow/\rightarrow to select ON, OFF.

5. Press OK.

This completes the setting.

DIGITAL VNR

When you set DIGITAL VNR to ON, you can reduce the noise on the screen so improving picture quality further.

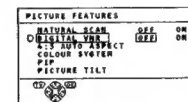
1. Press OK.

The MENU appears.

2. Press ∇/Δ to select PICTURE FEATURES, then press OK.

The PICTURE FEATURES menu appears.

3. Press ∇/Δ to select DIGITAL VNR.



4. Press \leftarrow/\rightarrow to select ON, OFF.

5. Press OK.

This completes the setting.

ZOOM

Select a ZOOM mode to change the picture format. You can enlarge the picture to fill the wide TV screen (16:9 aspect ratio). In addition, you can stretch a normal picture (4:3 aspect ratio) to fill the wide TV screen.

Notes:

- The picture format information of the present broadcasting programme may be received as WSS (Wide Screen Signalling). When AUTO mode is selected for ZOOM mode and the WSS signal is received, this TV automatically selects the optimum ZOOM mode corresponding to the WSS signal. However, in the case of weak WSS signal reception, this function may not work correctly. In this case, select an optimum ZOOM mode manually.
- If the EXT-1, EXT-2 or EXT-3 terminal's input is from a picture signal with a 16:9 aspect ratio picture format, the ZOOM mode may automatically changes to FULL mode. This is because the TV detects an identification signal which is not an WSS signal.

Manual ZOOM selection

you can select a desired ZOOM mode manually.

1. Press ZOOM repeatedly to select a ZOOM mode.

The picture expands.

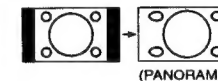
REGULAR mode:

Use to view a normal picture (4:3 aspect ratio) unchanged.



PANORAMIC mode:

Stretches the left and right sides of a normal picture to fill the screen, in a way that does not appear unnatural.

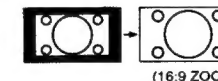


Notes:

- In PANORAMIC mode, the top and bottom of the picture are slightly cut off.

16:9 ZOOM mode:

Use to expand a wide picture (16:9 aspect ratio).



14:9 ZOOM mode:

Use to expand a picture with a 14:9 aspect ratio.



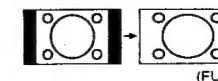
16:9 ZOOM SUBTITLE mode:

Use to expand a picture with a 16:9 aspect ratio having subtitles at the bottom of the screen.



FULL mode:

Uniformly stretches the left and right sides of a normal picture (4:3 aspect ratio) to fill the wide TV screen.



Notes:

- For pictures with a 16:9 aspect ratio that have been squeezed into a normal picture (4:3 aspect ratio), select FULL mode to restore their original dimensions.

To move the picture vertically:

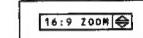
If you cannot see subtitles at the bottom of the screen, or if the top or bottom is cut off, move the picture vertically.

Notes:

- You cannot move the picture vertically in AUTO, REGULAR and FULL mode.

1. Press ZOOM.

The current ZOOM mode is displayed.



2. Before the display disappears, press ∇/Δ to move the picture up or down.

Notes:

- If you change the ZOOM mode, the picture returns to its default position.

Automatic ZOOM selection (AUTO mode)

You can set your TV to automatically select the optimum ZOOM mode to suit the picture format.

1. Press ZOOM repeatedly to select AUTO.

Your TV automatically selects the optimum ZOOM mode to suit the current programme's picture format.

Notes:

- This function may not work correctly depending on the programme. In this case, select the optimum ZOOM mode manually.

(Continued to the next page)

SOUND AND PICTURE

To preset a ZOOM mode for the normal picture:

You can preset one of three ZOOM modes, REGULAR, PANORAMIC or 14:9 ZOOM, as the ZOOM mode for the normal picture (4:3 aspect ratio).

1. Press OK.

The MENU appears.

2. Press ∇/Δ to select PICTURE FEATURES, then press OK.

The PICTURE FEATURES menu appears.

3. Press ∇/Δ to select 4:3 AUTO ASPECT, then press OK.

The 4:3 AUTO ASPECT menu appears.



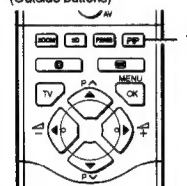
4. Press ∇/Δ to select a ZOOM mode.

5. Press OK.

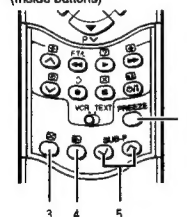
This completes the setting.

PIP (AV-32WP2EN, AV-32WP2EP only)

(Outside buttons)



(Inside buttons)



- 1 PIP button
- 2 FREEZE button
- 3 Multi button
- 4 Swap button
- 5 SUB-P ∇/Δ button

BASIC OPERATION

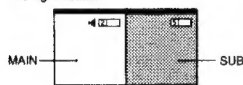
You can select two types of PIP picture mode.

1. Press PIP repeatedly to select a PIP mode.

Two pictures are displayed in the same time.

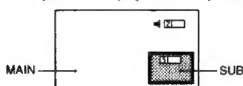
Twin pictures mode:

MAIN-picture is displayed on the left hand and SUB-picture is displayed on the right hand.



Picture in picture mode:

SUB-picture is displayed in Main picture.



2. Press SUB-P ∇/Δ to select the SUB-picture's PR channel or EXT mode.

To clear the SUB-picture:
Press the PIP button again.

Notes:

- The PR channel or EXT mode image which is the same as the MAIN-picture can not be selected.
- The movement of the Sub-picture image is not as smooth as that of the MAIN-picture image.
- If the MAIN-picture image signal condition is bad, the SUB-picture image may be disordered. If the MAIN-picture image signal condition is improved, the SUB-picture image also improves.
- If the picture standard of the MAIN-picture and SUB-picture are different, the top and bottom of one of them may be missing.
- If an external device is operated, the SUB-picture may disappear. If this happens, press the PIP button once more and redisplay the SUB-picture.
- If the SWAP button is pressed when the image from the external decoder is displayed in the MAIN-picture, the same image is displayed in both the MAIN picture and SUB-picture. If the SWAP button is pressed once more, the previous state is returned to.
- In the Twin pictures mode, a horizontal line is displayed at the top of the screen. This is normal and is not a malfunction.

To change the position of SUB-picture in Picture in picture mode:

You can select the one of four positions of the SUB-picture in Picture in picture mode.

1. Press OK.

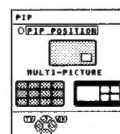
The MENU appears.

2. Press ∇/Δ to select PICTURE FEATURES, then press OK.

The PICTURE FEATURES menu appears.

3. Press ∇/Δ to select PIP, then press OK.

The PIP menu appears.



4. Press ∇/Δ to select PIP POSITION, then press \leftarrow/\rightarrow to select the position.

5. Press OK.

The menu disappears.

To listen to the sound of the SUB-picture

While listening to the sound of the main picture on the speakers, you can listen to the sound of SUB-picture on your headphones.

1. Press OK.

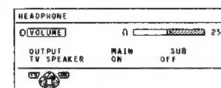
The MENU appears.

2. Press ∇/Δ to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.

3. Press ∇/Δ to select HEADPHONE, then press OK.

The HEADPHONE menu appears.



4. Press ∇/Δ to select TV SPEAKER, then press \leftarrow/\rightarrow to select ON or OFF.

ON:

Main picture sound from speakers while listening to the sound on your headphones.

OFF:

No sound from speakers

5. Press ∇/Δ to select OUTPUT, then press \leftarrow/\rightarrow to select SUB.

MAIN:

You can listen to the sound of MAIN picture on your headphones.

6. Press ∇/Δ to select VOLUME, then press \leftarrow/\rightarrow to adjust the volume of the headphones.

7. Press OK.

The menu disappears.

Notes:

- When the SUB-picture is in TV mode, the SUB-picture sound is monaural only.
- The Multi sound function does not work for the SUB-picture sound.
- Neither any of the surround sound functions or the POWER BASS function work for the SUB picture sound.

MULTI-PICTURE

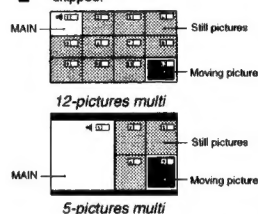
The PR channel and EXT mode images can be displayed as still pictures on the outside of the MAIN-picture, and the image which you want to see can be selected from these still pictures and seen as the MAIN-picture.

1. Press the Multi button.

The PR channel and EXT mode images are displayed in the channel number order. Only the image which is displayed last is left as a moving picture. The other images change to still pictures.

Note:

- The MAIN-picture PR channel number or EXT mode number is skipped.



In order to display the next PR channel or EXT mode image:
Press the Multi button again.

To clear the Multi-pictures:
Press the TV button.

2. Press the ∇/Δ button or SUB P ∇/Δ button and select the PR channel or EXT terminal image that you want to see.

The selected image changes from a still picture to a moving picture.

3. Press OK.

The Multi-pictures disappear and the MAIN-picture image changes to the selected PR channel or EXT terminal image.

To select the multi-picture style

You can select one of two multi-picture's styles.

1. Press OK.

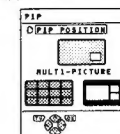
The MENU appears.

2. Press ∇/Δ to select PICTURE FEATURES, then press OK.

The PICTURE FEATURES menu appears.

3. Press ∇/Δ to select PIP, then press OK.

The PIP menu appears.



4. Press ∇/Δ to select MULTI-PICTURE, then press \leftarrow/\rightarrow to select a multi-picture's style.

5. Press OK.

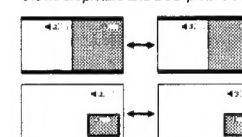
The menu disappears.

SWAP

You can swap MAIN and SUB-pictures

1. Press the Swap button.

Each time you press the Swap button, the MAIN picture and SUB-picture swap.



Notes:

- If the SWAP button is pressed when the image from the external decoder is displayed in the MAIN picture, the same image is displayed in both the MAIN picture and SUB picture. If the SWAP button is pressed once more, the previous state is returned to.
- When another PR channel is being watched in the SUB picture, if the SWAP function is used the TV broadcast PR channel, which is output from the EXT-1, EXT-2 or EXT-3 terminal, is switched.

FREEZE

You can view the MAIN-picture's frozen image as the SUB-picture.

1. Press FREEZE.

The main picture's frozen image (still picture) is displayed as the SUB-picture.



To cancel the FREEZE function:
Press the FREEZE button again.

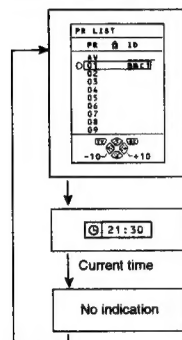
OTHER FEATURES

INFORMATION

You can display the PR LIST or the current time.

1. Press **○** (Information) repeatedly.

The display changes cyclically in the following order.



About PR LIST:

- Ten positions including the currently selected PR channel will be displayed as a list.
- Press **▼/▲** / **◀/▶** to select the desired PR channel. For details see page 7.

About the current time display:

This TV uses teletext data to determine the current time.

- If the TV has not received a station that has teletext data since it was turned on, the time display is blank.
- To view the current time, select a station that is broadcasting teletext data. As long as you do not turn off the TV, then even if you select other stations, the time will still be displayed.
- When watching videos, the wrong current time is sometimes displayed.

SLEEP TIMER

You can set the TV to automatically turn off after a specified period of time.

Note:

- The SLEEP TIMER does not turn off the Main power.

1. Press **OK**.
The MENU appears.
2. Press **▼/▲** to select **FEATURES**, then press **OK**.
The FEATURES menu appears.



3. Press **▼/▲** to select **SLEEP TIMER**, then press **OK**.
The SLEEP TIMER menu appears.



4. Press **◀/▶** to select a period of time.

You can set the period of time a maximum of 120 minutes in 10 minute increments.

OFF:

Turns off the SLEEP TIMER.

5. Press **OK**.

- The Sleep timer lamp lights if you set the SLEEP TIMER.

To display the remaining Sleep timer time:

Perform steps 1 to 3 to display the SLEEP TIMER menu, and press **OK** button when you finish checking the time.

To turn off the Sleep timer:

Perform steps 1 to 3 to display the SLEEP TIMER menu, press **◀** button to select "OFF", and then press **OK** button.

- The Sleep timer lamp goes out.

Note:

- One minute before the SLEEP TIMER turns off the TV, "GOOD NIGHT!" appears.

BLUE BACK

When viewing a PR channel with no or poor reception, or if there is no input from an external device, you can mute the sound and change the picture into a blue picture.

1. Press **OK**.
The MENU appears.
2. Press **▼/▲** to select **FEATURES**, then press **OK**.
The FEATURES menu appears.



3. Press **▼/▲** to select **BLUE BACK**.



4. Press **◀/▶** to select **ON** or **OFF**.

5. Press **OK**.

This completes the setting.

CHILD LOCK

You can lock some PR channels to prevent your children from watching them.

To set the CHILD LOCK

1. Press **OK**.
The MENU appears.
2. Press **▼/▲** to select **FEATURES**, then press **OK**.
The FEATURES menu appears.



3. Press **▼/▲** to select **CHILD LOCK**, then press **0** button.
The SET ID NO. menu appears.

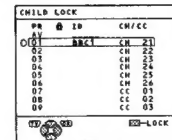


4. Enter the ID number.

1. Press **▼/▲** to select a number.
2. Press **◀/▶** to move the cursor.

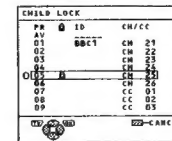
5. Press **OK**.

The CHILD LOCK menu appears.



6. Press **▼/▲** to select a PR channel, then press **blue** button.

The selected PR channel is locked.



- To cancel the CHILD LOCK: Press blue button again.
- Repeat step 6 to lock all PR channels which you want to lock.

7. Press **OK**.

This completes the setting.

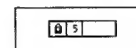
Notes:

- You cannot select a locked PR channel using the PR channel **V/A** buttons.
- Even if you can select a locked channel and display it, you can not view the programme of the locked channel.

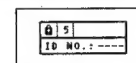
To view a locked PR channel

1. Select a locked PR channel.

- Use the number buttons to select the PR channel.
- The locked channel is displayed.



2. Press **○** (Information).
The ID NO. input menu appears.



3. Press the number buttons to enter the ID number.

You are now viewing the locked PR channel.

If you forget the ID number:

Perform steps 1 to 3 of "To set the CHILD LOCK". After you confirm the ID number, press the TV button to exit the menu.

DEMONSTRATION

The demonstration runs automatically and introduces the menus of this TV's main features.

1. Press **OK**.

The MENU appears.

2. Press **▼/▲** to select **DEMO**, then press **OK**.

The demonstration begins.

- To stop the demonstration, press any button on the remote control.

INDEX

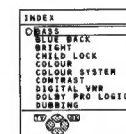
You can go to the desired function's menu directly from this INDEX menu.

1. Press **OK**.

The MENU appears.

2. Press **▼/▲** to select **INDEX**, then press **OK**.

The INDEX menu appears.



3. Press **▼/▲** to select the function you want to use, then press **OK**.

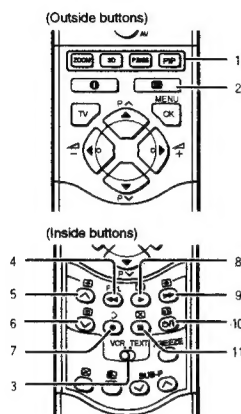
Your selected function's menu or the menu which includes your selected function appears.

- To return to the MENU, press the Information button.

TELETEXT

Note:

- If you have trouble receiving teletext broadcasts, consult your local dealer or the teletext station.



- Colour buttons
- TV/text button
- VCR/TEXT selector switch
 - When this switch is set to the TEXT side, the following buttons function as the teletext control button.
- MODE button
- HOLD button
- SUB PAGE button
- STORE button
- REVEAL button
- SIZE button
- INDEX button
- DISPLAY CANCEL button

BASIC TELETEXT OPERATION

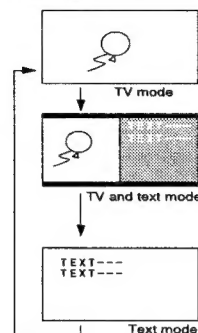
You can view three types of teletext broadcasts on the TV: Fastext, TOP and WST. The TV automatically recognizes the type of teletext broadcast.

Condition:

- The VCR/TEXT selector switch must already be set to the TEXT side.

- Select a channel with a teletext broadcast.

- Press (TV/text).



Note:

- If your TV is not AV-32WP2EN or AV-32WP2EP, the TV and Text mode can not be selected.
- The movement of the TV image in the TV and text mode is not as smooth as that in the TV mode.

- Select a page number.

Browse:

Press the PR channel ∇/Δ button on the remote control.

Direct selection:

Press the number buttons to enter a three-digit page number.

Colour button selection:

Press a colour button to select the corresponding page number on the bottom line of the screen.

Notes:

- Category names of teletext pages may appear instead of page numbers.
- In principle, ZOOM mode is fixed to FULL mode when you view Teletext programmes.
- Some Teletext programmes display a mixture of regular TV programmes and Teletext information. When viewing these programmes, ZOOM mode returns to the mode you selected before you started viewing Teletext programmes. With the ZOOM mode, the Teletext information may not be displayed in the correct position. If this happens, press the TV/Text button to cancel the Text mode, then press the ZOOM button to change the ZOOM mode to the PANORAMIC mode or FULL mode.

- To return to TV mode, press the TV/text button repeatedly.

Notes:

- You can also return to TV mode by pressing the TV button.
- None of the MENU operations are possible in the Text mode. Perform the MENU operation after pressing the TV/Text button to cancel the Text mode.
- In the TV and text mode, a horizontal line is displayed at the top of the screen. This is normal and is not a malfunction.

DISPLAY CANCEL

You can search for a teletext page while watching TV.

- Select a teletext page.

The TV searches for a teletext page.

- Press DISPLAY CANCEL.

The TV programme appears.

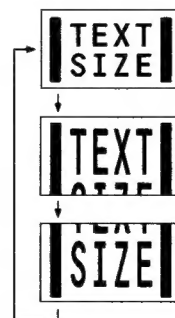
When the TV finds the teletext page, its page number appears in the upper left of the screen.

- Press (TV/text) when the page number is on the screen.

SIZE

You can double the height of the teletext display.

- Press SIZE repeatedly.

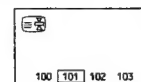


HOLD

You can hold a teletext page on the screen for a desired length of time, even while several other teletext pages are being received.

- Press HOLD.

is displayed in the upper left of the screen, and the teletext page is held on the screen.



To release hold mode:
Press HOLD button again.

INDEX

Just press INDEX button to return to the index page.

- Press INDEX.

Fastext/TOP/WST:

Returns to page 100 or a previously specified page.

LIST mode:

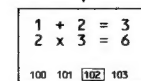
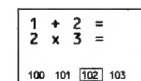
Returns to the page number displayed in the lower left area of the screen.

REVEAL

Some teletext pages include hidden text (such as answers to a quiz).

- Press REVEAL.

Each time you press REVEAL button, text is hidden or revealed.



LIST MODE

If you store the numbers of teletext pages you view often, you can quickly call up a desired teletext page whenever you like.

Note:

- You can store up to 64 pages in memory. You can store four pages in each channel from 1 to 15 (60 pages), and four pages that are the same for all channels above channel 15 (4 pages).

To store the page numbers

- Press MODE to engage LIST mode.

Stored page numbers are displayed at the bottom of the screen.

- Press a colour button, then enter the number of the teletext page.

To assign other pages to remaining colour buttons, repeat this operation.

- Press and hold STORE.

The four page numbers blink white to indicate that they are stored in memory.

To call up a stored page

- Press MODE to engage LIST mode.

Stored page numbers are displayed at the bottom of the screen.

To release LIST mode:

Press MODE button again.

- Press a colour button to which a page has been assigned.

SUB PAGE

Some teletext pages include sub-pages that are automatically displayed. You can hold any sub-page, or view it at any time.

- Call up a teletext page with sub-pages.

- Press SUB PAGE.

Sub-page numbers are displayed at the left of the screen.

Background colour of the sub-page number is yellow:

This is the number of the sub-page which is currently being displayed.

Background colour of the sub-page number is white:

These are the numbers of the sub-pages which can be displayed.

Background colour of the sub-page number is blue or red:

These are the numbers of sub-pages which have not been sent and can therefore not be displayed.

- Press ∇/Δ button to select a sub-page number.

SURROUND SOUND

DOLBY PRO LOGIC 3D-PHONIC

You can enjoy the ambience of Dolby Surround encoded programmes.

Condition:

- Before performing the procedure, disconnect headphones from the TV.

Note:

- This function works only with Dolby Surround encoded programmes.
- When operating this function, the TV's 3D lamp lights up.
- This function does not work correctly when listening to the sound with headphones.

1. Press OK.

The MENU appears.

2. Press ∇/Δ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently active function.



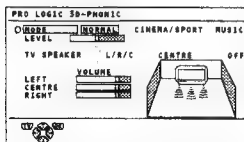
3. Press ∇/Δ to select PRO LOGIC 3D-PHONIC.

To cancel the function:

Select SURROUND OFF, then press the OK button.

4. Press \blacktriangleright .

The PRO LOGIC 3D-PHONIC menu appears.



5. Press ∇/Δ to select MODE.

6. Press $\blacktriangleleft/\blacktriangleright$ to select the desired mode.

NORMAL:

For normal programmes

CINEMA/SPORT:

For cinema and sports programmes

MUSIC:

For music programmes

To adjust the effect level:

Press the ∇/Δ button to select LEVEL, then press the $\blacktriangleleft/\blacktriangleright$ button to adjust the effect level.

To adjust the volume level of each speaker:

Press ∇/Δ button to select LEFT, CENTRE or RIGHT, then press the $\blacktriangleleft/\blacktriangleright$ button to adjust the volume level.

Note:

- Since models other than AV-32WP2EN and AV-32WP2EP do not have a centre speaker built-in to the TV, CENTRE can not be selected. However, when 2 external speakers are being used, the TV speakers can be used as the centre speaker, so CENTRE can be selected.

TV SPEAKER:

This setting is only changed when 2 external speakers are being used. For details, refer to "To use 2 external speakers" on page 27.

Note:

- When not using external speakers, leave the TV SPEAKER setting as L/R/C (L/R in the case of models other than AV-32WP2EN and AV-32WP2EP). Otherwise sound may not come out of the TV speakers or the sound may become monaural.

7. Press OK.

Note:

- If, while using this function, you connect headphones to your TV, the 3D HEADPHONE function (see next page) activates automatically. However, if SPEAKER is set to ON in the HEADPHONE menu, the 3D HEADPHONE function is not activated.

To turn on/off DOLBY PRO LOGIC 3D-PHONIC with one touch

1. Press 3D.

DOLBY PRO LOGIC 3D-PHONIC turns on.

3D

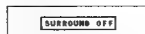
PRO LOGIC 3D-PHONIC

Note:

- If 3D HEADPHONE appears, disconnect the headphones from the TV.

To cancel the function:

Press the 3D button again.



To return the previous surround function:

Press the 3D button twice.

DIGITAL SURROUND

You can enjoy any one of the four Digital Surround functions.

Condition:

- Before performing the procedure, disconnect headphones from the TV.

1. Press OK.

The MENU appears.

2. Press ∇/Δ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently active function.



3. Press ∇/Δ to select the desired function.

DANCE CLUB:

For the atmosphere of a dance club

CONCERT HALL:

For the atmosphere of a concert hall

STADIUM:

For the atmosphere of a stadium

HYPER SOUND:

To give monaural sound the spacious feeling of stereo sound

To cancel the function:

Select SURROUND OFF.

4. Press OK.

Notes:

- Only HYPER SOUND works well with monaural sound programmes.
- HYPER SOUND does not work well with stereo sound programmes.
- If, while using this function, you connect headphones to your TV, Headphone Surround (see next page) activates automatically. However, if SPEAKER is set to ON in the HEADPHONE menu, the HEADPHONE SURROUND function is not activated.

HEADPHONE SURROUND

You can enjoy surround sound on your headphones. You can enjoy any one of the four Headphone surround functions.

Condition:

- Before performing this procedure, connect headphones to the TV.

1. Press OK.

The MENU appears.

2. Press ∇/Δ to select HEADPHONE SURROUND, then press OK.

The HEADPHONE SURROUND menu appears, showing the currently active function.



If HEADPHONE SURROUND does not appear in the MENU, set SPEAKER in the HEADPHONE menu to OFF. For details, refer to "To listen to the sound using headphones" on page 8.

3. Press ∇/Δ to select the desired function.

3D HEADPHONE:

For a broad, atmospheric sound

DANCE CLUB:

For the atmosphere of a dance club

CONCERT HALL:

For the atmosphere of a concert hall

STADIUM:

For the atmosphere of a stadium

HYPER SOUND:

To give monaural sound the spacious feeling of stereo sound

To cancel the function:

Select SURROUND OFF.

4. Press OK.

Note:

- HYPER SOUND does not work well with stereo sound programmes.

To turn the 3D HEADPHONE on/off with one touch

1. Press 3D.

3D HEADPHONE turns on.

3D

3D HEADPHONE

Note:

- If PRO LOGIC 3D-PHONIC is still displayed, set SPEAKER in the HEADPHONE menu to OFF.

To cancel the function:

Press the 3D button again.



To return the previous surround function:

Press the 3D button twice.

DOLBY PRO LOGIC SURROUND

You can also use Dolby Pro Logic Surround sound with 4 or 5 speakers. If you wish to use this system, additional amplifiers and speakers are required. For details, see "To use 4 or 5 speakers" on page 28.

Condition:

- Before performing the procedure, disconnect headphones from the TV.

Note:

- This function works only with Dolby Surround encoded programmes.

1. Press OK.

The MENU appears.

2. Press ∇/Δ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently active function.



3. Press ∇/Δ to select DOLBY PRO LOGIC.

To cancel the function:

Select SURROUND OFF.

AV-32WZ2EN
AV-32WZ2EP
AV-28WZ2EN
AV-28WZ2EP

OTHER PREPARATION

EXT SETTING

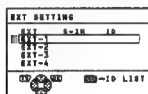
You can select S-VIDEO or normal input for the EXT-2, EXT-3 and EXT-4 terminals, and you can give an EXT ID to each EXT input terminal.

To select S-VIDEO input for a terminal

1. Press OK.
The MENU appears.
2. Press ∇/Δ to select EXT SOURCE, then press OK.
The EXT SOURCE menu appears.

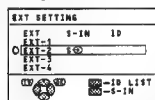


3. Press ∇/Δ to select EXT SETTING, then press OK.
The EXT SETTING menu appears.



4. Press ∇/Δ to select an EXT input terminal.

5. Press yellow button.
The S-VIDEO input indication appears.
- To select normal input, press yellow button again.

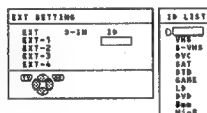


- If you want to set an EXT ID here, perform the operation procedures from the step 4 of the section "To give an EXT ID to an EXT input terminal" in the next column.

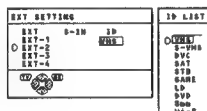
6. Press OK.
The menu disappears.

To give an EXT ID to an EXT input terminal

1. Press OK.
The MENU appears.
2. Press ∇/Δ to select EXT SOURCE, then press OK.
The EXT SOURCE menu appears.
3. Press ∇/Δ to select EXT SETTING, then press OK.
The EXT SETTING menu appears.
4. Press ∇/Δ to select an EXT input terminal.
5. Press blue button.
The ID LIST appears.



6. Press ∇/Δ to select an EXT ID.



Note:

- To erase the EXT ID, select a blank space.

7. Press OK.

- This completes the procedure. Press the TV button to exit the menu.

DUBBING

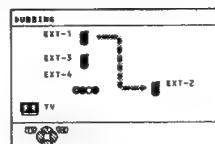
Select output to a VCR or other device connected to the EXT-2 terminal. Note that you cannot output from the EXT-2 terminal when the TV is tuned off.

Note:

- RGB signals from TV games and TELETEXT screens cannot be output from EXT-2 terminal.

1. Press OK.
The MENU appears.

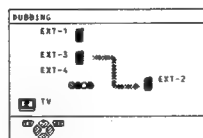
2. Press ∇/Δ to select EXT SOURCE, then press OK.
The EXT SOURCE menu appears.
3. Press ∇/Δ to select DUBBING, then press OK.
The DUBBING menu appears.



4. Press ∇/Δ to select the input which you want to output from EXT-2.

TV:

The sound and picture of the currently selected PR channel is output from EXT-2, so you can record the output on a VCR connected to the EXT-2 terminal while watching a video input from the EXT-1, EXT-2 or EXT-4 terminal. Even when a SUB picture is displayed, the output TV broadcast PR channel does not change. However, when another PR channel is being watched in the SUB picture, if the SWAP function is used, the output TV broadcast PR channel is switched.

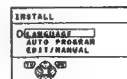


5. Press OK.
The menu disappears.

LANGUAGE

You can select one of ten languages for the on-screen display.

1. Press OK.
The MENU appears.
2. Press ∇/Δ to select INSTALL, then press OK.
The INSTALL menu appears.



3. Press ∇/Δ to select LANGUAGE, then press OK.
The LANGUAGE menu appears.



4. Press ∇/Δ to select a language.

5. Press OK.
This completes the setting.

AUTO PROGRAM

You can automatically allocate up to 99 stations to PR channels PR 1 to PR99 on this TV.

When the TV receives a signal describing the station's name, it allocates those stations, station IDs, and registers them as they were preset at the JVC factory.

1. Press OK.
The MENU appears.
2. Press ∇/Δ to select INSTALL, then press OK.
The INSTALL menu appears.
3. Press ∇/Δ to select AUTO PROGRAM, then press OK.
The COUNTRY menu appears.



4. Press ∇/Δ / $\triangleleft/\triangleright$ to select your country.

Note:

- If you make a mistake when selecting your country, or do not want to use the Automatic allocation function, press OK button to return to the INSTALL menu.

5. Press blue button.

The PR channel is automatically set and the EDIT menu is displayed.

- If you want to edit PR channels or allocate a station to PR0 (AV) channel, see page 24 "EDIT/MANUAL" for procedural description.

Note:

- If a station you want to view is not allocated to a PR channel, perform Manual allocation (see page 26).

- The procedure is complete. Press the TV button to exit the menu.

OTHER PREPARATION

EDIT/MANUAL

You can change PR channel settings by doing any of the following:

- You can delete an unwanted station from a PR channel.
- You can change the PR channel number of a station.
- You can add station IDs to PR channels.
- You can add a new station to a PR channel, or
- You can manually allocate the desired station to a PR channel.

To edit PR channels

- Press **OK**.
The **MENU** appears.
- Press **▼/▲** to select **INSTALL**, then press **OK**.
The **INSTALL** menu appears.
- Press **▼/▲** to select **EDIT/MANUAL**, then press **OK**.
The **EDIT** menu appears.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Use any of the procedures described in the following pages to change the PR channel settings.

- This completes the procedure. Press the TV button to exit the menu.

To delete a station from a PR channel

- Press **▼/▲** to select the station you want to delete.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Press yellow button.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

Note:

- Stations allocated to PR channels following the deleted PR channel number are shifted back by one to the preceding PR channel number.

To change the PR channel number of a station

- Press **▼/▲** to select the station.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Press **▶**.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Press **▼/▲** to move the selected station to the desired PR channel number.

- To cancel the operation, press the **(Information)** button.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Press **◀**.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

To add a station ID to a station

- Press **▼/▲** to select the station.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Press red button.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Press **▼/▲** to select the first letter of the desired station's ID.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Press blue button.

The **ID LIST** menu appears.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Press **▼/▲** to select the station ID.

- To cancel the operation, press the **(Information)** button.

- Press **OK**.

Returns to the **EDIT** menu.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

Programming a station's ID manually

Follow the operations below in place of steps 3 thru 5.

- Press the **▼/▲** button repeatedly to select a character.
- Press the **▶** button to move cursor to input position.
- To complete station ID, follow steps (1) and (2) repeatedly.

To add a new station to a PR channel

- Press **▼/▲** to select the row containing the PR channel number to which you want to add a station.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

- Press green button.

- Press **▼/▲** to display the enter number indicator.

CH: to add terrestrial broadcast stations
CC: to add cable TV stations

AV-32WP2EP, AV-32WZ2EP and AV-28WZ2EP only:

If **COUNTRY** is set to **FRANCE**, select one of the following four items:

- CH1:** to add a system L terrestrial broadcast channel
- CH2:** to add a system B/G or I terrestrial broadcast channel
- CC1:** to add a system L cable TV channel
- CC2:** to add a system B/G or I cable TV channel

- To cancel the operation, press the **(Information)** button.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

Note:

- For details on the relationship between the displayed CH/CC number and the actual channel number, see the Channel table on page 31.

- Press the number buttons to enter the channel number.

- To enter a one-digit channel number, enter the corresponding number and press **OK** button.

PR	ID	CH/CC
01	BBC1	CH 21
02		CH 22
03		CH 23
04		CH 24
05		CH 25
06		CH 26
07		CH 27
08		CH 28
09		CH 29

Note:

- When you add a station, the station preset to PR99 is deleted.

AV-32WZ2EN
AV-32WZ2EP
AV-28WZ2EN
AV-28WZ2EP

OTHER PREPARATION

To manually allocate a station to PR channel (Manual allocation)

Condition:

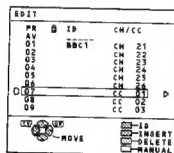
- If your TV is AV-32WP2EP, AV-32WZ2EP or AV-28WZ2EP, you can manually allocate French channels to PR channels.

To manually allocate French stations to PR channels, you must set COUNTRY to FRANCE. If COUNTRY is set to any other country than FRANCE, perform "AUTO PROGRAM" steps 1 thru 4 on page 23 to set COUNTRY to FRANCE. Then press the OK button to return to the INSTALL menu. Finally perform "To edit PR channel" step 2 thru 3 on page 24 to return to the EDIT menu.

1. Press ∇/Δ to select a PR channel number.

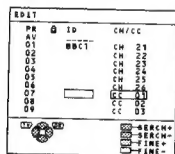
Note:

- PR channel number "AV" appears on the screen as PR 0 channel. We recommend that you allocate this PR channel to a VCR connected to the aerial socket.



2. Press blue button.

Your TV enters the Manual allocation mode.



3. Press green or red button to search for a station.

Scanning stops when the TV receives a broadcast.

Press green or red button to search for another station, and keep searching until you see the station you want.

CH: Terrestrial broadcast stations
CC: Cable TV stations

If reception is poor:

Press the blue or yellow button to fine-tune the station.

If your TV is AV-32WP2EP, AV-32WZ2EP or AV-28WZ2EP: When COUNTRY is set to FRANCE, the broadcast system is displayed as "(B/G)", "(I)" or "(L)" to the right of the PR channel number. If the signal of a station is incorrectly received, press the \blacktriangleright button to change the broadcast system and then repeat step 3.

Note:

- For details on the relationship between the displayed CH/CC number and the actual channel number, see the Channel table on page 31.

4. Press OK.

The station is allocated to a PR channel.

PICTURE TILT

(except AV-28WZ2EN and AV-28WZ2EP)

The AV-32WP2EN, AV-32WP2EP, AV-32WZ2EN or AV-32WZ2EP has a large picture tube in which a picture could be tilted to the left or right because of magnetic pull from the earth. Use the procedure described below to adjust the picture.

Note:

- The AV-28WZ2EN or AV-28WZ2EP does not have the tilted image correction function.

1. Press OK.

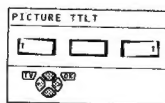
The MENU appears.

2. Press ∇/Δ to select PICTURE FEATURES, then press OK.

The PICTURE FEATURES menu appears.

3. Press ∇/Δ to select PICTURE TILT, then press OK.

The PICTURE TILT menu appears.



4. Press $\blacktriangleleft/\blacktriangleright$ to select the direction to which you want to correct the tilted image on your screen.

- ☐ : If it is inclined to the left, select this symbol to correct it.
- ☐ : If it is inclined to the right, select this symbol to correct it.
- ☐ : If it is not inclined to either the left or right, select this symbol to set it as it is.

5. Press OK.

The correction is complete.

CONNECTING AMPLIFIERS AND SPEAKERS

Condition:

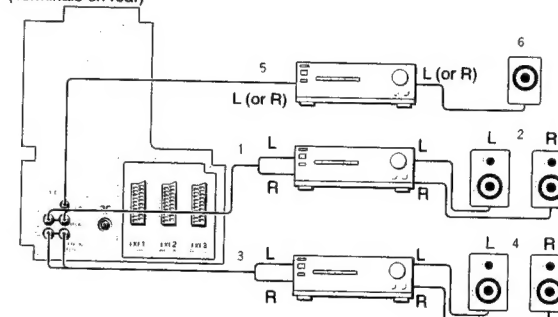
- When connecting audio amplifiers and speakers to your TV:
 - Turn the TV and audio amplifiers off before connecting them.
 - Set the audio amplifiers' volume to minimum.
 - Refer to manuals provided with the amplifier and speakers for further details.

Notes:

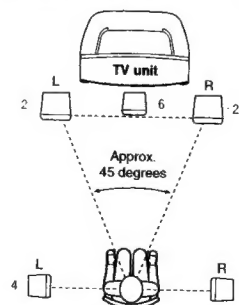
- The AUDIO OUT terminals on your TV are for connecting to an audio system. The output level is controlled by the Volume controls of your TV. The signal from the AUDIO OUT terminals will not cut off when headphones are connected.
- If you connect a Dolby Pro Logic Surround decoder to your TV, use the FRONT L and R jacks. Your TV has Dolby Pro Logic Surround functions, so if you connect an external decoder, turn off all surround function on your TV.

- 1, 3: Stereo amplifier
- 2: Front speakers (magnetic-shielded type, L, R)
- 4: Surround speakers (L, R)
- 5: Stereo amplifier (or monaural amplifier)
- 6: Centre speaker (magnetic-shielded type)

(Terminals on rear)



Positioning speakers



Notes:

- For a good effect, place speakers 4 1.0 m above the seated listener's head.
- For a good effect, place speaker 6 as close as possible to the TV along the same line as or behind speakers 2.
- Use magnetic-shielded speakers for speakers 2 and 6 to avoid TV interference.

To use 2 external speakers

You can cut off the sound output from the TV's speakers and enjoy sound from external front speakers.

1. Connect stereo amplifier ① and front speakers ② to your TV.

2. Turn your TV on, and press the Volume \rightarrow button to set the volume to the lowest setting.

3. Press OK.

The MENU appears.

4. Press ∇/Δ to select SOUND SETTING, then press OK.

The SOUND SETTING menu appears.



Note:

- When DOLBY PRO LOGIC or PRO LOGIC 3D-PHONIC is selected in DIGITAL SURROUND menu, "SPEAKER" does not appear. In this case, press the OK button to exit the current menu. Then, press the 3D button twice to select SURROUND OFF and repeat from Step 3.

5. Press ∇/Δ to select SPEAKER.

6. Press $\blacktriangleleft/\blacktriangleright$ to select OFF.

The TV's speakers become silent.

To output sound from the TV speakers: Set SPEAKER to ON.

7. Press OK.

The menu disappears.

When using the TV speakers as the centre speaker:

When enjoying the DOLBY PRO LOGIC 3D-PHONIC surround sound, it can be set so that 2 external speakers and the TV speakers (used as the centre speaker) can be used at the same time.

(Continued to the next page)

CONNECTING AMPLIFIERS AND SPEAKERS

In particular, since models other than AV-32WP2EN and AV-32WP2EP do not have a centre speaker built-in to the TV, if this method is used the "dialogue" becomes clearer.

1. Press OK.

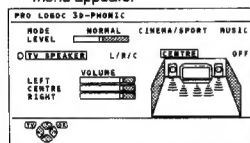
The menu appears.

2. Press ∇/Δ button to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears.

3. Press ∇/Δ button to select PRO LOGIC 3D-PHONIC, then press \blacktriangleright .

The PRO LOGIC 3D-PHONIC menu appears.



4. Press ∇/Δ button to select TV SPEAKER, then press $\blacktriangleleft/\blacktriangleright$ button to select CENTRE.

5. Press OK.

The menu disappears.

8. Turn your audio amplifier on, and return the volume of your audio amplifier to the normal setting.

Note:

- Take care not to set the volume of your audio amplifier too high as this may damage your speakers.

9. Press the Volume $-/+$ button to adjust the volume.

- This completes the procedure.

To use 4 or 5 speakers

You can enjoy Dolby Pro Logic Surround sound with 4 or 5 speakers.

1. Connect audio amplifiers and speakers to the TV.

Do one of the following:

- A:** Connect stereo amplifier 3 and surround speakers 4.

- If your TV is AV-32WP2EN or AV-32WP2EP, it has a centre speaker built-in and you can easily enjoy Dolby Pro Logic surround sound using 5 speakers.

- If your TV is not AV-32WP2EN or AV-32WP2EP, although it does not have a centre speaker built-in to the TV, you can easily enjoy Dolby Pro Logic surround sound by using the PHANTOM mode which omits the centre speaker.

- B:** Connect stereo amplifiers 1, 3, front speakers 2, and surround speakers 4. This uses the TV's speakers as the centre speakers.

- C:** Connect stereo amplifiers 1, 3, stereo amplifier (or monaural amplifier) 5, front speakers 2, surround speakers 4, and centre speaker 6. If you use this method, do not output sound from the TV's speakers.

2. Turn your TV on, and press the Volume $-/+$ button to set the volume to the normal setting.

3. Press OK.

The MENU appears.

4. Press ∇/Δ to select DIGITAL SURROUND, then press OK.

The DIGITAL SURROUND menu appears, showing the currently selected setting.



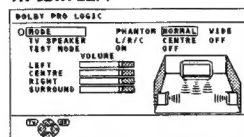
Note:

- If DIGITAL SURROUND does not appear, disconnect the headphones from the TV.

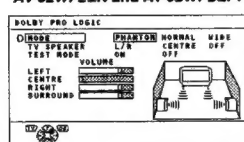
5. Press ∇/Δ to select DOLBY PRO LOGIC, then press \blacktriangleright .

The DOLBY PRO LOGIC menu appears.

In the case of AV-32WP2EN or AV-32WP2EP:



In the case of models other than AV-32WP2EN and AV-32WP2EP:



6. Press ∇/Δ to select an item, and press $\blacktriangleleft/\blacktriangleright$ to change its setting.

In the case of AV-32WP2EN or AV-32WP2EP:

Method	Item	
	MODE	TV SPEAKER
A	NORMAL	L/R/C
B	NORMAL	CENTRE
C	NORMAL	OFF
	WIDE	

In the case of models other than AV-32WP2EN and AV-32WP2EP:

Method	Item	
	MODE	TV SPEAKER
A	PHANTOM	L/R
B	NORMAL	CENTRE
C	NORMAL	OFF
	WIDE	

Notes:

- Set MODE to WIDE when using a full-range speaker as the centre speaker. Frequencies of 100 Hz or lower are output from the centre speaker to give Dolby Surround an even greater impact.

- Since AV-32WP2EN and AV-32WP2EP have a centre speaker built-in to the TV, it is not necessary to select the PHANTOM mode. If the PHANTOM mode is selected, sound is prevented from coming out of the centre speaker.

7. Turn your audio amplifier on, and return the volume of your audio amplifier to the normal setting.

Note:

- Take care not to set the volume of your audio amplifier too high as this may damage your speakers.

8. Press ∇/Δ to select TEST MODE.

9. Press $\blacktriangleleft/\blacktriangleright$ to set TEST MODE to ON.

Test signals alternate among the speakers.

Note:

- If the test signal level is small to listen to, adjust it with the volume of your audio amplifier. However, take care not to set the volume too high as this may damage your speakers.

10. Press $\blacktriangleleft/\blacktriangleright$ to adjust the level of each of the speakers so that their volumes are the same at the listening position (the place where the person is sitting in the diagram, see page 27).

LEFT, RIGHT:
Front speaker L, R

CENTRE:
Centre speaker

SURROUND:
Surround speakers

Notes:

- When MODE is set to PHANTOM, the volume of CENTRE: (Centre speaker) cannot be adjusted.
- If the volume of both speakers is not the same even after adjusting the volume, adjust the volume of your audio amplifier.

11. Press OK.

The menu disappears.

- This completes the procedure.

TROUBLESHOOTING

- If the plug is disconnected from the AC socket, or the TV aerial has problems, you may think there is a problem with the TV itself. Be sure to check the following before calling for service.

IMPORTANT

- Review all instructions in this manual.

	Problem	Action
■ GENERAL	No power supply.	Insert the plug in an AC socket. Press the Main power button (see page 6).
	No picture or sound.	Check aerial connections (see page 4). Press the number 0 button to select the correct mode (see page 10). Select the correct colour system manually (see page 11).
	The power shuts off automatically.	Press the Standby button to turn the power on again (see page 6)
	Inoperable remote control.	Replace the batteries (see page 2). Insert the batteries correctly (see page 2). Use the remote control within about 7 metres of the TV.
	MENU can not be displayed.	Are you watching the Teletext screen? None of the MENU operations are possible in the Text mode. Perform the MENU operation after pressing the TV/Text button to cancel the Text mode.
■ PICTURE	Poor colour.	Adjust COLOUR and BRIGHT (see page 12). Select the correct colour system manually (see page 11).
	The screen mode suddenly changed.	The ZOOM mode's automatic selective function is working (see page 13).
	The picture is tilted (AV-32WP2EN/EP, AV-32WZ2EN/EP only).	Use the PICTURE TILT to correct the tilt (see page 26).
	The SUB-picture image is disordered.	If the MAIN-picture image signal condition is bad, the SUB-picture image may be disordered. If the MAIN-picture image signal condition is improved, the SUB-picture image also improves.
	The top and bottom of the MAIN-picture or SUB-picture are missing.	If the picture standard of the MAIN-picture and SUB-picture are different, the top and bottom of one of them may be missing.
	The SUB-picture display suddenly disappears.	If an external device is operated, the SUB-picture may disappear. If this happens, press the PIP button once more and redisplay the SUB-picture.

AV-32WZ2EN
AV-32WZ2EP
AV-28WZ2EN
AV-28WZ2EP

TROUBLESHOOTING

	Problem	Action
■ PICTURE	The same image is displayed in both the MAIN-picture and SUB-picture.	If the SWAP button is pressed when the image from the external decoder is displayed in the MAIN-picture, the same image is displayed in both the MAIN-picture and SUB picture. If the SWAP button is pressed once more, the previous state is returned to.
	Lines or streaks in picture (interference).	Move the components apart until the interference is eliminated. Reposition the aerial.
	Spots (crosstalk).	Reposition the aerial. Replace with an aerial with better directionality.
	Double pictures (ghosts).	Reposition the aerial. Replace with an aerial with better directionality.
	Snowy pictures (noise).	Check aerial connections. Redirect the aerial. Replace or repair the aerial.
	The screen turns blue.	The BLUE BACK function is on (see page 16).
■ SOUND	No sound from the TV's speakers.	Disconnect the headphones. If you want to have sound come from both the TV's speaker and headphones, set TV SPEAKER in the HEADPHONE menu to ON. (See page 8.) Set SPEAKER to ON (see page 27).
	The headphone volume level can not be adjusted.	It can not be adjusted with the Volume +/- button. Adjust it with the VOLUME function in the HEADPHONE menu. (See page 8.)
	The sound from the TV does not stop even if the headphones are connected.	TV SPEAKER in the HEADPHONE menu is set to ON. Change the setting to OFF. (See page 8.)
	No stereo sound.	Change STEREO/I+II to CD mode (see page 11). Is TV SPEAKER on the PRO LOGIC 3D-PHONIC menu or DOLBY PRO LOGIC menu set to CENTRE? Change the TV SPEAKER setting to L/R/C or L/C. (See pages 27 and 28.) When the SUB-picture is in TV mode, the SUB-picture sound is monaural only.
	No "SUB-I" or "SUB-II" sound in a multisound broadcast.	Change STEREO/I+II to the correct mode (see page 11). The Multi sound function does not work for the SUB-picture sound.
	Surround function does not function properly.	Dolby Pro Logic Surround and DOLBY PRO LOGIC 3D-PHONIC work properly only with Dolby Surround encoded programmes. Functions other than HYPER SOUND and the Headphone surround functions work properly only with stereo programmes. HYPER SOUND works properly only with monaural programmes. None of the surround sound functions work for the SUB picture sound.
	The POWER BASS function does not work.	Are you listening to the SUB picture sound? The POWER BASS function does not work for the SUB picture sound.
■ TELETEXT	No teletext reception.	Tune to a teletext broadcast channel (see page 18). We recommend that you not videotape teletext, as it may not be recorded correctly.
	The current time is not displayed.	Tune to a teletext broadcast channel (see page 16).

The following are normal and are NOT malfunctions:

- When you touch the CRT surface, you might feel a slight charge of static electricity. This is because the CRT contains static electricity; it does not affect the human body.
- The TV may emit a crackling sound due to a sudden change in temperature. There is no problem unless the picture or sound is abnormal.
- When a bright a still image (of a white dress, for example) appears on the screen, the image may be coloured. This problem occurs in all CRTs, and as the bright image disappears, such colouration also disappears.
- This TV is equipped with a microcomputer that may operate abnormally due to interference from external components. If this happens, turn off the main power and disconnect the power cord from the AC socket. Then reconnect the power cord to AC socket and turn on the main power again.

Channel table

- The following table shows the relationship between the displayed CH/CC channel number and the actual channel number.
- The actual channel numbers for the "CC" channel numbers from CC110 to CC161 differ depending on the cable TV station. Check which actual channel numbers correspond to which "CC" channels while referring to the broadcast frequencies which are indicated in the channel tables of each cable TV station. If you can not find the broadcast frequency for a channel, contact the cable TV station.

CH	Channel	CH	Channel	CC	Channel	CC	Channel
CH 02 / CH 202	E2	CH 40 / CH 240	E40	CC 01 / CC 201	S1	CC 31 / CC 231	S31
CH 03 / CH 203	E3, ITALY A	CH 41 / CH 241	E41	CC 02 / CC 202	S2	CC 32 / CC 232	S32
CH 04 / CH 204	E4, ITALY B	CH 42 / CH 242	E42	CC 03 / CC 203	S3	CC 33 / CC 233	S33
CH 05 / CH 205	E5, ITALY D	CH 43 / CH 243	E43	CC 04 / CC 204	S4	CC 34 / CC 234	S34
CH 06 / CH 206	E6, ITALY E	CH 44 / CH 244	E44	CC 05 / CC 205	S5	CC 35 / CC 235	S35
CH 07 / CH 207	E7, ITALY F	CH 45 / CH 245	E45	CC 06 / CC 206	S6	CC 36 / CC 236	S36
CH 08 / CH 208	E8	CH 46 / CH 246	E46	CC 07 / CC 207	S7	CC 37 / CC 237	S37
CH 09 / CH 209	E9, ITALY G	CH 47 / CH 247	E47	CC 08 / CC 208	S8	CC 38 / CC 238	S38
CH 10 / CH 210	E10, ITALY H	CH 48 / CH 248	E48	CC 09 / CC 209	S9	CC 39 / CC 239	S39
CH 11 / CH 211	E11, ITALY H+1	CH 49 / CH 249	E49	CC 10 / CC 210	S10	CC 40 / CC 240	S40
CH 12 / CH 212	E12, ITALY H+2	CH 50 / CH 250	E50	CC 11 / CC 211	S11	CC 41 / CC 241	S41
CH 21 / CH 221	E21	CH 51 / CH 251	E51	CC 12 / CC 212	S12	CC 75 / CC 275	X
CH 22 / CH 222	E22	CH 52 / CH 252	E52	CC 13 / CC 213	S13	CC 76 / CC 276	Y
CH 23 / CH 223	E23	CH 53 / CH 253	E53	CC 14 / CC 214	S14	CC 77 / CC 277	Z, ITALY C
CH 24 / CH 224	E24	CH 54 / CH 254	E54	CC 15 / CC 215	S15	CC 78 / CC 278	Z+1
CH 25 / CH 225	E25	CH 55 / CH 255	E55	CC 16 / CC 216	S16	CC 79 / CC 279	Z+2
CH 26 / CH 226	E26	CH 56 / CH 256	E56	CC 17 / CC 217	S17		
CH 27 / CH 227	E27	CH 57 / CH 257	E57	CC 18 / CC 218	S18		
CH 28 / CH 228	E28	CH 58 / CH 258	E58	CC 19 / CC 219	S19		
CH 29 / CH 229	E29	CH 59 / CH 259	E59	CC 20 / CC 220	S20		
CH 30 / CH 230	E30	CH 60 / CH 260	E60	CC 21 / CC 221	S21		
CH 31 / CH 231	E31	CH 61 / CH 261	E61	CC 22 / CC 222	S22		
CH 32 / CH 232	E32	CH 62 / CH 262	E62	CC 23 / CC 223	S23		
CH 33 / CH 233	E33	CH 63 / CH 263	E63	CC 24 / CC 224	S24		
CH 34 / CH 234	E34	CH 64 / CH 264	E64	CC 25 / CC 225	S25		
CH 35 / CH 235	E35	CH 65 / CH 265	E65	CC 26 / CC 226	S26		
CH 36 / CH 236	E36	CH 66 / CH 266	E66	CC 27 / CC 227	S27		
CH 37 / CH 237	E37	CH 67 / CH 267	E67	CC 28 / CC 228	S28		
CH 38 / CH 238	E38	CH 68 / CH 268	E68	CC 29 / CC 229	S29		
CH 39 / CH 239	E39	CH 69 / CH 269	E69	CC 30 / CC 230	S30		

(Continued to the next page)